

**ABSTRACT OF THE DISCLOSURE**

A technique for reducing noise in pixel images includes modifying initial image data to prevent subsequent image data loss, shrinking the modified image, processing the shrunken image with known segmentation-based filtering techniques which identify and differentially processing structures within the image. After processing, the shrunken image is enlarged to the dimensions of the initial data and subsequently processed to correct intensity irregularities and to preserve CT numbers. The resulting technique is versatile and provides greatly improved computational efficiency while maintaining image quality, allowing for dose reduction during imaging.

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